

# 11<sup>TH</sup> CTV

back to the sense of the city

## RESIDENTIAL AREAS IN THE STRUCTURE OF THE CITY. CASE STUDIES FROM WEST EUROPE AND KRAKOW

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**Key words:** Housing settlements, city structure, public spaces

### Abstract

Once they adopted the sedentary lifestyle, humans set to building settlements which were to protect groups of families and give them the sense of belonging to a material and social community. The settlement unit which could be called a housing complex goes back thousands of years BC. The scale of problems related to housing environment grew considerably with the emergence and development of cities, yet truly distinctive quantitative and qualitative changes occurred in the early 20th century.

Implementation of the programmatic assumptions of the Athens Charter resulted in the emergence of spatial and functional structures based on hierarchic dependence of components. The initial projects reflected the pursuit of a human-scale environment and the structural division into neighbourhood units. Undoubtedly, the second part of the 20th century brought about a change in the trends of development in cities. Large housing estates were abandoned in favour of a much greater diversity of housing complex forms – the revived form of city street, urban block or the classic form of a residential complex with clearly delineated structure, services and – most frequently – some recreational areas. The 21st century draws from well-known patterns, complementing them with new elements and solutions imposed by the requirements of the principles of sustainable development.

Due to the limited availability of land in highly urbanized central city parts, contemporary housing development occupies more peripheral areas, often at the border between urban and rural neighbourhoods. The development process involves numerous participants, often with opposing interests – public authorities, whose concern should be sustainable growth of the whole city, and developer firms and investors, whose motivation is to maximize profit. This situation has led in most Polish cities to the emergence of disconnected fenced-away residential ghettos with no spatial order.

Meanwhile, housing development in Western Europe continues to be built as planned urban complexes drawing from the experience of the past and satisfying the needs of the contemporary city dwellers.

The article presents several urban complexes with dominant housing development (Orestad in Copenhagen, Monte Laa and Nordbahnhof-Area in Vienna, Ijburg in Amsterdam and Riem in Munich) built relatively recently. It discusses their functional, spatial and social characteristics, which make them examples of good practice in contemporary urban planning. They demonstrate clearly that only comprehensive planning in a broader scale guarantees creation of high-quality urban spaces, where the welfare of resident communities is a priority.

## Introduction

Kenneth T. Jackson wrote: *“It may turn out that futurologists are right and great cities of our time will fall like Carthage – by the end of the next century they will have disappeared without a trace. (the text was written in 1998) Yet, it is probable that the metropolises of the 90s of the 20<sup>th</sup> century will continue to be metropolises in the 90s of the 21<sup>st</sup> century.”* (K. T. Jackson, 2001, p. 533)

The above words of a history and social sciences professor are basically proving true. Although only a part of metropolises are experiencing rapid growth, particularly in the Far East, indeed, most big cities have preserved their status.

Cities, having emerged as a result of people gathering in one place and developing economic relations and dependencies, take their origin in prehistoric settlements. Humans used to build settlements to protect a group of families and to manifest their alliance as well as the material and social union. With time, prehistoric settlements developed into urban organisms, complex enough to contain settlement units, which we could call housing units or estates. Cities were becoming more and more attractive places to live, offering diverse chances and opportunities. As cities grew and more areas were taken up by housing development, the scale of problems related to building new houses for the incoming population was expanding.

Utopian Charles Fourier, observing the development of the society and its spatial framework, concluded that the 19<sup>th</sup> century society was situated only between stage IV (barbarianism) and stage V (civilisation). Stage VI (guarantism, which would guarantee universal order) was to come next, according to him, followed by stage VII – “great harmony.” (H. Syrkus, 1984). Fourier held that in order to achieve the final stage of harmony, which would enable people to realise the passions of the human nature, they should be grouped into phalanxes –

communities of 810 men and 810 women, occupying the area of 400 ha and living in phalanstries, i.e. hotels surrounded by facilities offering services. His proposals related to balancing the land fertility and climate in the world scale, treating work as passion and as a sport subject to healthy competition sound very modern even now. The author envisioned means of transport that would enable travellers from Brussels to have breakfast in Paris, lunch in Lyon and dinner in Marseilles without even getting tired.

*A question then could be asked about which stage we are now? Have we made a step forward? It seems that there is no universal order nor great harmony. The definition says that spatial order is the manner of organising space which, taking into account in its orderly relations all the functional, social, economic, environmental, cultural and aesthetic conditions, creates a harmonious whole (Z. Paszkowski, 2015, p.207).*

### Definitions, trends and theories

It is obvious that the significant quantitative and qualitative changes in city development took place at the turn of the 19<sup>th</sup> and 20<sup>th</sup> century. Expansion of industrial cities provided inspiration for starting a debate on the most rational way to build housing districts. Implementation of the programmatic postulates of the Athens Charter of 1933 resulted in the emergence of spatial and functional housing structures based on hierarchic interdependence of their functional programme components. Building projects designed by Werkbund architects and Walter Gropius demonstrated the pursuit of a human-scale environment and structural division into neighbourhood units. The concept of the unit appeared in the works by Doxiadis, for whom the housing estate was a growing organism, always composed of the same cells. According to him, the smallest community was supposed to be created by minimum 500 and maximum 3,000 families. His concept for Islamabad was based on two scales: walking accessibility within the unit and fast transport between the units and the centre. In the case of rapidly growing cities, interesting were also experiments exploring the concept of a housing unit in dense urban development, such as for example the housing estates in Vienna, the so-called superblocks (G. Schneider-Skalska, 2004).

The beginning of the 20<sup>th</sup> century brought the designs and projects built by Taut, such as the Onkel Toms Hütte (1926-31), which offered good housing conditions in contact with nature. It was precisely the scale, the buildings' height of approximately three-storeys and the enclosures penetrated by greenery that created the atmosphere which, according to the words of Helena Syrkusowa, allowed the residents to develop emotional bonds with them, and therefore they may justly be given the name of true housing units (H. Syrkus, 1984).

The whole urban organism was also undergoing changes. The situation in which there was one administrative and commercial centre providing services for the growing number of inhabitants resulted in the fact that the newly emerging residential districts had to be built at increasingly greater distances from this centre. They started living their own lives, had no features of inner city development and created residential zones, which were soon emerging in almost every city. Suburban areas were also growing. Initially uniform in character, they were losing their

structural purity over time. Clarity of the spatial-functional structure of the new city districts became a problem of primary importance.

*The question, asked in the middle of the 20<sup>th</sup> century, whether new residential areas should be closely connected with the city and constitute a part of the structure that could be called urban, or perhaps they should constitute self-sufficient units, remains valid.*

Considering the problem of the role of residential areas in the structure of the city, we may not ignore the necessity of defining the area we are discussing. As has previously been observed, the city is not a uniform system. At least three basic zones may be distinguished within it: the central zone, the residential zone and the suburban zone. Each of them includes the housing function, yet each one in a different degree. Defining them from this perspective, we could say that: (G. Schneider-Skalska, 2004).

- the leading features characterising *the central zone* are multi-functionality and an attractive form; the housing environment remains secondary and subordinate to the dominant features of the zone and to its urban structure; the primary role has been reserved for public spaces, neighbourhood spaces are often absent or they adopt non-typical forms; elements of nature are present in forms requiring intensive technical interventions;
- *the residential zone*, with the dominant housing function, should have all the features desired in a housing environment and at the same time the characteristic urban structure composed of compact forms; this zone should be characterised by closer contact with nature and a prominent presence of elements of nature treated as urban material; public spaces should be the binding element in the urban structure, the main identity-forming role is performed by neighbourhood space, whereas private areas take the form of balconies and terraces; urban residential zone is characterised by a high level of diversity in spatial forms, and it often requires some remedial action to give it some features of an urban structure;
- in *the suburban zone*, the leading function is recreation and contact with nature; the structure is dominated by open areas and residential development forming a suburban and self-sufficient habitat; both compact and dispersed forms are present, however, they are subordinated not only to contact with nature but also to the well thought-out and consistently implemented concept of the city growth; private spaces are dominant, neighbourhood spaces may also play an important role; this zone is characterised by the supremacy of close-to-natural landscape.

The above definitions are important in the context of the changes which took place not only in Poland in the late 20<sup>th</sup> century – the economic dictates of the developer and departure from designing large multi-family estates. Developments have started to take up areas located inside cities, often left vacant by declining or collapsing industry (greyfields and brownfields), yet suburban areas (greenfields) have also been and continue to be built up. The new developments are most frequently small units, in which the functional programme is limited to an inner yard with a playground for children. Documents and publications evaluating the quality of residential areas, such as *Polska Polityka Architektoniczna / Polish Architectural Policy/* or *Przestrzeń życia Polaków / The Living Space of Poles/*, point out to important problems plaguing

the residential districts built in Poland in the late 20<sup>th</sup> and early 21<sup>st</sup> century as well as the ones which are being built now. The list includes: spatial and functional chaos, absence of clear structure, absence of a coherent vision of the city and what place should be reserved for housing areas in this vision, absence of transportation network continuity, poor location or absence of public services, absence of organised green areas, dangerous reduction of distances between buildings and poor quality of common spaces in the estates. Such components as kindergartens, nurseries, community integration centres or social spaces are no longer situated within the area of interest of planners and designers.

A classic example which epitomises the advantages and disadvantages of individual development stages of contemporary residential areas is the place in Kraków known as Ruczaj, the area between Kobierzyńska and Grota-Roweckiego streets on the one side and Bobrzyńskiego on the other, in the outskirts of the city. Looking at the land which has already been built up and the land which is planned for further development, we could distinguish three zones here: "the old Ruczaj" (the 80s of the 20<sup>th</sup> century), "the new Ruczaj" (late 20<sup>th</sup>, early 21<sup>st</sup> century) and "Ruczaj of the future" (allotted for multi-family development in city plans). This area will be characterised further on in the article.

*The phenomena occurring in Polish cities seem to be common for many European countries. Fragmentation and increasing spatial chaos, quantitative and qualitative changes, more free time, pursuit of comfort oescape into suburban areas are noticeable in most cities. Hence it is no surprise that a number of urban theories emerged at the turn of the centuries and in early 21<sup>st</sup> century which, taking into account the principles of sustainable design, reach for the good, often well known, functional and spatial patterns. In most of them, the fundamental indicators of quality of life are clarity of the structural organisation and pedestrian accessibility.*

Richard Rogers proposes a high quality environment, with a varied programme of services and recreation options accessible on foot and with jobs situated in the vicinity. Millennium Village designed by Ralph Erskine, a symbol of the housing environment of the late 20<sup>th</sup> and early 21<sup>st</sup> century, is based on structural organisation, pedestrian accessibility and intense contact with elements of nature.

According to Léon Krier, a city's growth may only be based on Urban Quarters, self-sufficient and autonomous districts with their own centres and the size limited to no more than 35 ha and the number of inhabitants of up to 15,000. Their internal division should be based on pedestrian accessibility (L.Krier, 2001). Structuralisation and the role of pedestrian accessibility are also prominently featured in American concepts, such as e.g. the ones described by Douglas Farr in his book *Sustainable Urbanism*.

In order to highlight the invariable character of the approach to the structural organisation of residential areas, we could invoke the design of the residential tower *Bionic Tower* for 100,000 inhabitants, whose authors are M. R. Cervera and Javier Pioz from Spain (G. Schneider-Skalska 2004). The concept, one might think, is totally different from the hitherto followed patterns and tradition approved of in Europe, yet when it comes to the question of structure and residents' access to recreation, it exhibits far-reaching traditionalism in the positive sense of the

word. Aware of the needs of human psychic, the authors have divided the structure into 12 segments – estates, each of which is organised along the pattern of a housing unit for approx. 8,000 inhabitants, organised around the common space of a park and a water reservoir.

## Case studies

The contemporary European practice offers various examples exhibiting noticeable classic and clear spatial layout and a wealth of services. A characteristic feature is the presence of a system of public and semi-public spaces, which determine the clarity of the inner structural division and the links with the surrounding areas. The examples include independent units, though connected with the mother city, such as Solar City in Linz, and estates and units inscribed into the structure of the cities, such as Monte Laa – “the estate over the motorway” – and the Nordbahnhof-Area estate in Vienna or the Danish Orestad in Copenhagen, Dutch IJburg in Amsterdam or German Riem in Munich.

These are mostly urban units with the dominant housing function, erected towards the end of the 20<sup>th</sup> and at the beginning of the 21<sup>st</sup> century. They are examples of contemporary good practice in urban planning, demonstrating that solely comprehensive planning in a broader scale guarantees creation of a high quality space, where the welfare of the inhabitants is the main priority.

*Solar City – an iconic example of a sustainable housing estate* – is an exceptional project even among the many estates/areas where the structure, programme and detailed solutions meet the requirements of the sustainable development paradigm. The idea seems to combine E. Howard’s notion of “the garden-city” with Soria y Mata’s linear city, obviously, taking into account all the natural differences resulting from the time when these concepts were created. It is most certainly very close to the theoretical ideas created one hundred years before.

An important condition for the emergence of the series of independent, concentrically composed units “strung” on the fast tram line was locating the whole system outside the concentrated compact urban development. Hence both the whole planned series and the already erected and now functioning unit, which is a part of it, were placed at a certain distance from the city of Linz, separated from it with rather large industrial areas. The completed part is a classic estate, with a school, kindergarten, recreational areas and a services facility located in the centre and connected to the fast tram stop. Due to its rather peculiar location, the development is mostly of suburban character, firmly established in greenery and the placing of buildings was determined by the desire to make the best possible use of the sun exposure of the privileged façade. We could ask a question whether reaching back to the classic idea of a self-sufficient modern estate is a good direction of city growth. It must be noted, however, that it is not a totally self-sufficient unit, but the first part of a larger, well thought-out string of estates. Once the subsequent links of the chain are built, it will be possible to see whether the concept has proved feasible and may become an attractive suburban alternative for the dense development of central and residential zones of the city.



**Figure1. Solar City: development scheme and central public space view**

**Source:** photos: G.Schneider- Skalska

*Monte Laa Estate in Vienna, called the metropolitan suburb*, could only come into existence owing to a bold decision to step beyond the growth barrier which was the motorway – one of the major roads leading to Vienna. Introducing a bridge structure over the motorway and closing it in a tunnel enabled construction of an estate above it (A. Drapella-Hermansdorfer, 2015.). It is undoubtedly the most characteristic feature of this project, which is a clear continuation of one of the “rays” radiating from the Favoriten district. It is not this feature, though, that determines the positive evaluation of the new housing environment. Its greatest assets are the green areas located in close vicinity and large green areas situated within the estate, a clear structure built of units in good scale and the diversity of accompanying functions, such as a kindergarten, a school, shops and office buildings, but first of all – an attractive, formally and functionally diverse linear garden. This garden is a form of a semi-public space, separated from any contact with vehicle traffic. It ties the whole estate together, giving it a clear structure and making it safe. Individual units of development have their own neighbourhood spaces, marked out spatially, yet without fencing, organised as green backyards. The result of good location, good planning and good design decisions is a housing district of great value as a part of the city and a friendly living environment for its inhabitants.

**Figure 2. Monte Laa settlement: plan**

**Source:** author P.Tor, based on maps.google.com

**Figure 3. Monte Laa settlement: neighbourhood and semipublic space views**

Source: photos. G.Schneider – Skalska

*The Ørestad district in Copenhagen* seems to be a good example illustrating an attempt to establish a new district as a part of a comprehensive concept of developing the whole urban system. Copenhagen was one of the first cities in which the positive transformations, continuing to take place in the city until now, were started; the first changes were introduced as early as in the 50s of the previous century and they were based on a general plan developed in 1947. According to the plan, the capital city was to grow following the five-finger layout, where each of the “fingers” was to become an axis of the city growth based on the essential means of public transport – the underground. The plan was verified and modified in the 90s of the 20<sup>th</sup> century, the result of which was supplementing the five-finger layout of 1947 with “the sixth finger” – the Ørestad district, located on Amager island to the south of Copenhagen. Its significance has grown since the opening of the Øresund Bridge in 2000, linking Denmark with Sweden. Thanks to the bridge, “the sixth finger” has been lengthened to reach as far as Malmö. Copenhagen is characterised by highly developed urban culture, so it is worthwhile having a closer look at the solutions implemented in the creation of this district and maybe using this example for comparative purposes when discussing the above-mentioned Ruczaj area in Kraków.

Amager had been previously absent in the development plans for Copenhagen because the area lacked adequate infrastructure (including in particular transportation). This is why the development of this district started with investments into infrastructure. The most important in the spatial and functional aspects was building the underground line, which was to constitute the backbone of the whole project. The funds for implementation of the project were to be obtained from the sale of land in the new district, which was owned by the city and the state, as well as from the expected income generated by the sale of tickets. *Due to the existing conditions (the suburban development of the Sundby district to the east and the nature reserve to the west), Ørestad took the shape of an elongated rectangle with the dimensions of approx. 5.5 x 0.6 km. The proportions of the district required dividing it into four smaller units of similar size, each with a different dominant function.*



**Figure 4. Ørestad district: plan and main passage linking particular areas**

**Source:** author P.Tor based on maps.google.com, photo: P.Tor

The unit situated furthest to the north – Ørestad Nord – is directly adjacent to the historic fabric of Copenhagen. Its area is occupied by public utility buildings, such as the Copenhagen Concert Hall (designed by Jean Nouvell), DR Byen – the headquarters of the Danish national broadcasting corporation or some of the facilities of the Copenhagen University, together with residential development of approx. 1,000 flats (half of which are accommodation for students). The next unit – ØrestadFælled – most of which is located within the area of the nature reserve AmagerFælled, is characterised by a low degree of development on the eastern side of the above-ground section of the underground line, it is just a narrow strip of low-density development. Ørestad City in turn is dominated by the exhibition and conference centre Bella Center and the Field's shopping mall, supplemented by multi-family development focused mostly around the extensive Byparkenpark area. The unit situated furthest to the south – ØrestadSud – is characterised by numerous commercial, office and services buildings in its northern part, whereas its southern part, the outermost area of the district, is dominated by the residential function.

According to plans, the development structure is to be composed of office and commercial buildings (60%), residential development (20%) and buildings related to culture, commerce and

services as well as other purposes (20%). It is expected that 80,000 people will find employment in the area and it will provide homes to 20,000 permanent residents; additionally, a large group of users are supposed to be students, 20,000 of whom are already studying at the institutions located here.<sup>1</sup> These data demonstrate an actual departure in the planning of the Ørestad district from the modernist concepts of mono-functionality and putting emphasis on diversification of functions in the area, with highlighting one dominant function as determining its character.

*The four structural units are connected by a route of vehicle transportation, an underground line and a water course – the most important element in the district's spatial structure. Together with its accompanying lakes, canals and other water reservoirs, it forms a compositional backbone of the district.* At least such was the original concept, yet the length of the water canal and the barriers existing in the area have obscured the continuity of the system, and apparently it would be better to consider the district as separate neighbourhoods. The easiest to evaluate is the northern part of the area since it is most advanced and the development is the closest to the ultimate plan.

*The perception of the Nord unit is unambiguous and clear – it appears to be an integral part of the city, more a completion and a closing component of the development in central Copenhagen than the beginning of a new district.* Here, we must return to the question asked in the introduction, whether a new estate/residential neighbourhood should be the continuation of the city structure or it should be a separate entity. It would seem that the examples discussed above demonstrate that both solutions are equally valid, and the choice will depend on local conditions.

*The impression one gets of the Nord unit as being well integrated with the city results from the already-discussed diversity of functions of urban character as well as from the clear spatial layout with well-planned public spaces.* The most important role in this part is played by the water canal and its adjacent area, which is a compositional and functional axis of the neighbourhood. Owing to various forms and heights of buildings, the area abounds in numerous alleys, squares and mini-beaches, which provide a venue for many urban activities. The diversified development around the canal (on the east side – the university buildings, on the west – residential units, including students' dorms) creates a place that is vibrant with life at every time of day. The area is very close to being completely "urban," yet there is still one thing that is missing from the picture – ground floors of the buildings lack the additional generators of daily life – restaurants, small shops etc.<sup>2</sup>

*The space in Ørestad Nord is very clearly organised in a sequential and hierarchic way as well as in the aspect of its functional division. The public part is discernibly separated from green areas belonging to their surrounding residential buildings. These may be reached along two*

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<http://www.orestad.dk/english/uk-5minutes.aspx>

<sup>2</sup> The importance of attractive ground floors in the city structure is discussed *inter alia* by Jan Gehl in his books *City for People* and *How to study public life*.

axes crossing the representational part with the canal. On these axes are “strung” more secluded yards, whose different function is indicated by street furniture and greenery. The division between the generally accessible zones and the ones which are more private is quite clear, yet the absence of unambiguous barriers (fences) considerably contributes to the positive reception of the area as a uniform organism. Formal diversification of the areas attached to the residential and commercial development has been additionally highlighted by the varied form of the water courses, which, in some parts of the area, wind across the green spaces planned for residents’ use – meandering freely –and elsewhere create a straight canal, forming the backbone of the commercial and public part of the district.

**Figure 5. Ørestad district: public and semipublic space views**



**Source:** photos: P.Tor

The southern part of Ørestad Nord, situated at the end of the main canal, seems to be the least friendly part of the district, creating the impression of being subordinated to the organisation of the transportation infrastructure (it is closed by a busy road with a car park connected to the station of the underground). A large, partly open area in the form of a square, lined with representational buildings on one side, does not encourage visitors to stay within its space, thus becoming solely a place of transit, where people change their means of transport and walk to the station. It turns out, however, that this area is the last undeveloped part of Ørestad Nord, which is destined to be built up; the planned structures will surround future public spaces, thus completing the development of the district.

Analysing the local land use plan<sup>3</sup> as well as the designs to be executed in this area, we can see that the idea underpinning the establishment of the new district is going to be continued. Similarly to the earlier projects, the area that is to be developed last will be filled with units of

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<http://soap.plansystem.dk/jsp/getdoklink.jsp?planid=2585619&planttype=20&status=V> (as of 24<sup>th</sup> Jan. 2016)

mixed functions: office and residential, including accommodation for students. The example in question indicates the return of block development, with irregular network of streets and squares creating small-scale urban spaces, contrasting in their form with the straight-line composition of the development along the canal. Public spaces in the whole area are surrounded by structures of different functions – the square in front of the building occupied by the radio broadcasting corporation will be closed with a line of residential development, and the inner pedestrian routes will be lined with office and residential buildings. One change with regard to the hitherto prevailing practice is the requirement, included in the local land use plan, of reserving some space in the ground floors of buildings for commercial services, with special emphasis on cafés, restaurants and boutiques. Once such establishments start their operation, public spaces are bound to fill with the lively crowd of passers-by, cyclists and people simply hanging out there.

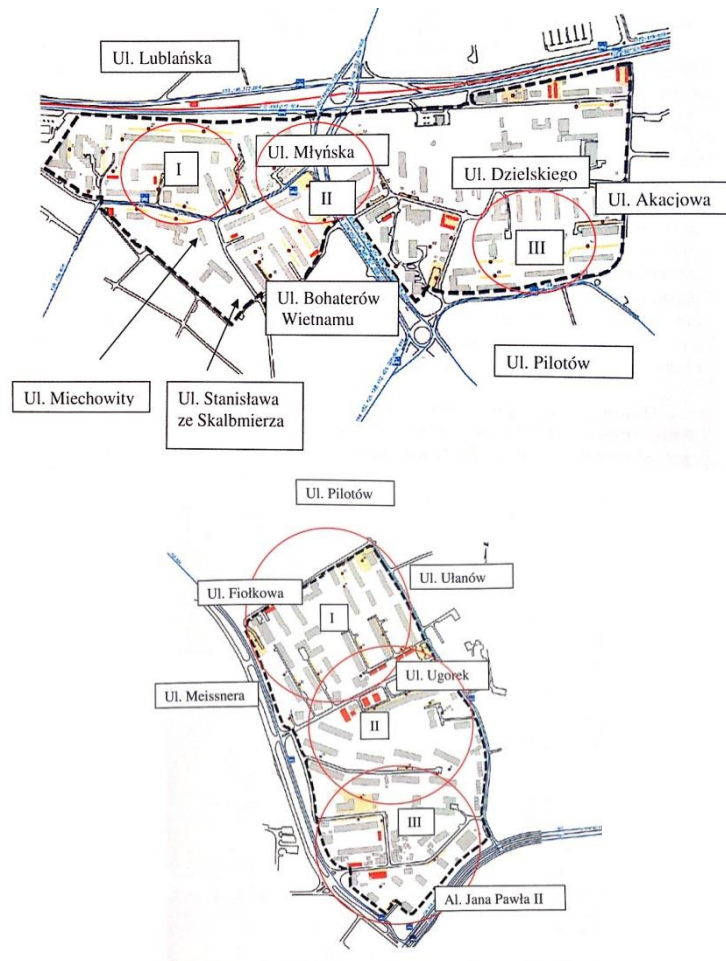
### *The experience of Kraków*

The examples discussed above are relatively new projects, emerging at the turn of the 20<sup>th</sup> and 21<sup>st</sup> century, and thus they exhibit the contemporary trends in diversified design of sustainable housing environment. It must be noted, however, that in every European city there are housing estates built in the mid-20<sup>th</sup> century, and in the countries of Central Europe the area occupied by such estates is particularly extensive. *In Poland, and we could use the example of Kraków here, we are witnessing a characteristic metamorphosis of these large post-war housing estates, which – once located in the peripheries – over time have found themselves in the strictly residential zone. Their role in the city structure should not be underestimated since they occupy a considerable area and provide homes to a great number of people.* At present, functioning of such estates, their evaluation, diagnosis and, subsequently, suggestions of what should be done in the future have become subject of the Programme of the Kraków Housing Estates Rehabilitation undertaken by the Municipality of Kraków. The first stage was the Pilot Programme of Rehabilitation of the Ugorek and Olsza II Estates.<sup>4</sup> The team of scientists from the Institute of Urban Planning, Faculty of Architecture, Cracow University of Technology, carried out analyses in the “macro” and “micro” scales and prepared a functional-spatial diagnosis, at the outset defining the relevant points of reference. It had been decided that the estate should create a “*living, comfortable and healthy*” environment. These descriptors were given attributes, which were subsequently searched for in the examined estates, and the results of the examination provided grounds for formulation of certain conclusions for the future. The research in the “micro” scale was done in units which were discernibly separated spatially, called “neighbourhoods.”

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<sup>4</sup> The authors of the analysis: the Team of the Institute of Urban Planning, Faculty of Architecture, Cracow University of Technology: Justyna Kobylarczyk, *doctor habilitatus* in Architecture – the head of the team, prof. Grażyna Schneider-Skalska – expert, Patrycja Haupt, PhD in arch., Kinga Racoń-Leja, PhD in arch., Paweł Tor, M.Arch, Wojciech Sumlet, M.Arch, Students' Study Group *Sustainable Design*.



**Figure 6 Olsza and Ugorek settlements : neighbourhoods schemes**

**Source:** author J.Kobylarczyk

*In all the examples discussed above, as well as in the research on the housing estates in Kraków, several basic components and features of a housing unit/estate/area have been highlighted which affect the quality of their inhabitants' lives regardless of their location within the city structure. These are most certainly: convenient connections with the city centre, logical spatial structure, good availability of a varied programme, hierarchy of space elements, a clear system of public and neighbourhood spaces as well as presence of a network of green areas providing contact with nature.*

Another research project on the housing environment quality and the role of a large housing estate in the structure of a city was undertaken in the Institute of Urban Design, FA CUT, within the framework of the post-diploma study programme entitled *Housing Estates in Urbanised Areas: Development, Transformations, Revitalisation*. The subject of the research was the already mentioned area of Ruczaj in Kraków developing roughly at the same time as the described Ørestad district. The Kraków estate has been growing incessantly since the mid-80s.



It is not a uniform structure, yet in large parts – mono-functional. As has already been mentioned, it is made up of three developments. The one that is situated furthest to the north, called conventionally “the old Ruczaj,” is a typical great-slab housing estate built in the 80s of the 20<sup>th</sup> century, composed as an integral whole and devoid of any accompanying functions, yet in a way constituting certain continuation of the urban fabric featured in the neighbouring areas. The hitherto conducted research suggests that it is possible to rehabilitate this estate by increasing its functional diversity and developing clear public and semi-public spaces.

The second development unit is the neighbourhood built after 1990, which we have called “the new Ruczaj.” Its northern part is occupied by an independent “entity” comprising the areas and facilities of the Jagiellonian University Campus III and office buildings. On the other side of the busy street, there are solely residential buildings. Comparing these two very different parts as well as comparing Ruczaj with the Ørestad district, we cannot fail to notice how the legislation concerning town and country planning and the form of land ownership, or rather the ensuing possibility of deciding its use, affect the shape of spaces. The comprehensively planned JU Campus III, creating an intentionally composed system, contrasts with the chaotic development of the residential part, which – due to the absence of local land use plan – has been built in small chunks on the grounds of separate administrative decisions.

**Figure 7. Ruczaj settlement : plan and main passage linking particular areas**



**Source:** author P.Tor , based on maps.google.com (photo: P.Tor)

*One of the most important components of the space under consideration, exerting disintegrating influence on the whole neighbourhood, is Michała Bobrzyńskiego street, running between the university campus and the residential area. Through its very form (two lanes of traffic separated from the neighbouring development with sound barriers), it creates a strong barrier cleaving the space, both from the formal and functional perspective. The areas of key importance, constituting a kind of seam between the areas of different functions, have been subordinated to the motor vehicle traffic. All the other activities characteristic of urban life have thus been*

eliminated, and using the street as a compositionally and functionally important element of the city fabric (similarly to the canal in Ørestad Nord) has been made impossible. It is all the more incomprehensible now when all the modern urban concepts are based on giving priority to pedestrian traffic, removing cars and returning the space in cities to their rightful owners. Especially so, that it is the city authorities who have direct influence over the solutions which are chosen to be implemented. The form of the road crossing Ruczaj and the barrier thus created is particularly important given the deficit of public spaces in the areas in its closest vicinity, occupied by multi-family residential development.

*Due to the ownership structure of these areas, the developers' desire to maximise profit and absence of any legislative limitations, the residential units that have emerged here do not form an urban structure superimposed on a network of streets, squares and plazas. They are solely a randomly composed collection of fenced-away developments linked by an unclear system of roads, reducing their residents to the role of secondary users of these spaces. Insufficient amount of places serving social contact in the space of the estate does not encourage people to stay between the buildings and create human interrelations. Because of the low quality of public spaces in the residential part of Ruczaj, there are no activities going on here apart from moving between the place of residence and commercial venues (retail and services facilities) or public transport stops. The place of residence does not offer inhabitants any space where they could hang out and thus the district is reduced to the status of one of the city's dormitory neighbourhoods. The low quality of urban space in Ruczaj is additionally affected by the fact that most of the open space in the estate is used as a car parking area.*

**Figure 8. Ruczaj settlement : edges that divide spaces of different purposes**



**Source:** photos: P.Tor, G.Schneider-Skalska

*A chance of improving the quality and attractiveness of the public spaces in the neighbourhood would be creation of stronger links between the residential areas and the Campus facilities in their vicinity. The existing and planned plazas and promenades accompanying the University buildings could become a meeting place not only for the students, who are their exclusive users now, but also for the inhabitants of Ruczaj; they could make an important place of social*

activities on the map of the estate and the whole city. Strengthening the connection between these areas could also reduce the significance and the negative influence of the substandard solutions implemented in Bobrzyńskiego street, which are the reason why at present the Campus public spaces serve only the students.

The Ruczaj estate, like many other contemporary developments, is situated next to large green areas, which could be a place of active recreation for its residents. Unfortunately, whereas in the examples in Western Europe, such areas are directly connected or, indeed, they fuse with each other, in the Kraków estate they are separated by a busy road and an extensive area of the University campus. Such location, combined with the absence of any clear mutual links and a considerable distance (exceeding 500 m in a straight line, and in reality amounting to 1 km), limits the possibility of the Ruczaj residents to use them, or, it may be said, it totally excludes such possibility.

It is to be feared that the areas of “the new Ruczaj” which have been built up so far are irreversibly lost as a chance for Kraków to create a modern urban district – vibrant with life at all times of day, with various mixed functions combined with public spaces, friendly to all kinds of users. Perhaps the hitherto conducted research and debates going on in academic as well as local government circles will help to avoid the now recognised errors in the next, third part of the estate, called “Ruczaj of the future,” and make it a showcase of modern thinking about designing urban housing environment.

## Conclusions

- The analysis of the presented contemporary examples from abroad allows us to draw the conclusion that the timeless principles of the Athens Charter, put into practice in Polish estates built in the 70s and 80s of the 20<sup>th</sup> century, are still valid, yet they must always be considered jointly with the proposals included in the New Athens Charters of 1998, 2003 and 2012 as well as with the Charter of European Planning. We have collected some new experience and understood where we had gone wrong before. Numerous attempts at structural organisation of residential developments indicate that there is a need to create units whose sizes are comprehensible and easily identifiable for their residents, regardless of whether they are integral parts of the city or partly independent organisms.
- The discussed developments all exhibit common trends in creating urbanised environment. Despite different formal and compositional solutions, they all share certain similar features: a varied functional programme, creation of formal and informal links – both in the direct context and the larger scale – and a similar way of organising the space within them.
- Special attention should be paid to the solutions related to public areas as they decide whether the whole development makes a clearly organised structure and whether it forms an integral part of the city fabric. Generally accessible streets and squares, and – with time – also green recreational areas have always created *genius loci*. These are the spaces where the life of a city and its inhabitants have always been going on, and they determine “the urban character” of a given space.

- Humans are looking for a stable and safe place which is easy to relate to. In the scale of large agglomerations, the city as a whole has ceased to be such place. This role may be played by a housing neighbourhood, as it is an organised and spatially defined space, partly open and of a clearly higher density than its surroundings, with its own characteristic features, facilitating identification and communication with its surroundings.
- Creating a clear structure of the housing environment is necessary if the offered spatial, emotional and functional values are to be coherent with the needs of its inhabitants.

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